

**Catalyst for synthesizing methane thiol from synthetic gas containing high-concentration hydrogen sulfide**

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**Abstract of CN1528516**

The invention relates to a catalyst to use synthetical gas containing high concentration H<sub>2</sub>S as raw material to synthesize methane thiol by one-step method, composed of carrier, active component and active accelerant, where the carrier selects SiO<sub>2</sub>, TiO<sub>2</sub> or heavy rare earth oxide; the active component is Mo-O-K based compound, converted by the fore body K<sub>2</sub>MoO<sub>4</sub> or (NH<sub>4</sub>)<sub>6</sub>Mo<sub>7</sub>O<sub>24</sub> plus sylvine or MoO<sub>3</sub> plus sylvine; the active accelerant is mainly transition metal like Mn, Fe, Co, Ni, Ce, La, etc, or rare earth oxide; it makes catalysis reaction at 295 deg.C and 0.2 Mpa in the volume ratio of the raw material gases CL/H<sub>2</sub>/H<sub>2</sub>S=1/2/(0.1-1) at an airspeed of (1-5) x ten to the power 3 h<sup>-1</sup>, showing high activity and selectivity, the methane thiol's time-space catching rate is up to 0.18-0.25g.h<sup>-1</sup>. ml<sup>-1</sup>cat, and the methane thiol's selectivity is 93.5%-98.8%.

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